

### REMARKS

By the *Final Office Action* of 23 June 2003, Paper No. 8, Claims 1-19 and 36-51 are pending in the Application, the pending Claims rejected, and Claims 20-35 withdrawn. By the present *Response and Amendment After Final Rejection*, the Applicant amends Claims 1, 8, 14, 45, 48 and 50, and leaves unchanged the remaining pending Claims. No new matter is believed introduced by the present *Response and Amendment After Final Rejection*. It is respectfully requested that the present amendments be entered, and respectfully submitted that the present Application is in condition for allowance for the following reasons.

**1. Phone Conference**

Applicant's counsel thanks the Examiner for the phone conference held earlier to discuss this Application.

**2. Claims Rejections under 35 U.S.C. § 112, second paragraph**

Claims 45-51 are rejected under 35 U.S.C. § 112, second paragraph. Applicant amends Claim 50 as kindly suggested by the Examiner. Claims 44 and 48 have been amended to remove the recitation that raised the indefinite language, namely, the "if any" terms.

**3. Claims Rejections under 35 U.S.C. § 103**

Claims 1-19 and 36-51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Mathieu (0000738) in view of Dinkel (3284980). Applicant respectfully submits that with the amendments to the independent Claims, the present Application is in form for allowance.

Applicant had previously submitted argument to show that neither cited reference taught or suggested:

A construction element having *an impervious membrane on the lower principal surface of the core*.

The Applicant showed that while Mathieu may disclose a *manufacturing process* of a construction element, wherein in the snap shot of manufacturing, the element was shown with a lower membrane, *the lower membrane was in fact only a cover for the conveyor*, and not part of the finished construction element, which finished construction element was claimed in the present Application.

The Examiner noted in the *Final Office Action* that he believed Mathieu did show this lower membrane (in the manufacturing process of Mathieu), and "[t]here is nothing in the claims which require that the construction element be separated from that of the conveyor belt or the film/membrane" *Final Office Action*, Page 8.

Applicant now provides such language in the Claims of the present Application. Each independent Claim now recites in some form that the claimed impervious membrane on the lower principal surface of the core *remains on the lower principal surface of the core after the manufacture of the construction element*. It is respectfully submitted that this recitation is neither taught nor suggested in the cited references.

Applicant respectfully shows the Examiner that Mathieu discloses *manufacturing* a construction element with a *membrane covering the conveyor* so the conveyor doesn't get soiled, but it does not disclose a construction element *itself* having the impervious membrane as recited in the Claims of the present invention. The Claims now recite that the membrane remains with the core after manufacture.

Mathieu clearly discloses that the membrane that is used to protect the conveyor during manufacture *does not* remain with the construction element after its manufacture, thus Mathieu teaches away from the present invention.

For example, Figs. 1-4 and 7-11 of Mathieu are disclosed as showing the steps of manufacturing/formation of a panel:

FIGS. 1 to 4 illustrate in schematic cross sectional views steps in the formation of an example panel in accordance with the present invention;

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FIGS. 7 to 11 illustrate in schematic cross sectional views steps in the formation of another example panel in accordance with the present invention having a U-shaped edge reinforcing mesh;

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Figs. 1-4 and 7-11 show the membrane 2. *On the other hand*, Figs. 5, 6 and 12 show the panel made from the steps of the Mathieu manufacture.

FIG. 5 is a schematic partial cross sectional view of a reinforced edge of a panel made in accordance with the steps illustrated in FIGS. 1 to 4;

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FIG. 6 is a schematic partial cross sectional view of a reinforced edge of another example panel made in accordance with the present invention wherein only one broad side face includes reinforcing mesh at the marginal edge area thereof

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FIG. 12 is a schematic partial cross sectional view of a reinforced edge of a panel made in accordance with the steps illustrated in FIGS. 7 to 11;

The panel of Mathieu as shown in these illustrations *does not* have the membrane 2. That is because the membrane 2 of Mathieu is used only to protect the conveyor belt.

Further support for the proposition that the membrane 2 of Mathieu does not remain with the panel can be found in paragraph 167 of the publication, emphasis added:

In accordance with the present invention a support substrate may comprise a conveyor belt (supported on tab) and *a protective film*. If desired or necessary the protective film may be dispensed with but in such a case it may be necessary [to] coat a particular conveyor belt with agents such as anti-stick agents.

That is to say, the protective film 2 of Mathieu is part of the support substrate during manufacture to protect the conveyor, protecting the conveyor belt from sticking to the wet panel.

Additionally, as disclosed in paragraph 254:

The apparatus includes a protective film alignment component for alignment of a protective film 55 onto the conveyor belt. The protective film 55 is feed from a roll of such film (not shown). *A protective film 55 is laid onto the belt so as to protect it and avoid the necessity of applying a release agent thereto.* The film 55 should be wider than the board's width, for example wider by at least 5" to 7" or more. The protective film 55 may for example be made of polyethylene 3.0 to 5.0 mils in thickness.

The Figs. and disclosure of Mathieu that teach the use of a protective film during manufacture to protect the conveyor, but not to remain with the finished panel, *is exactly what the present invention overcomes in the problems of the prior art*, of which Mathieu is one.

While the conventional backerboard is generally stable and water resistant, it is not an ideal construction panel for use in wet environments due to several inherent limitations. For example, it is generally recommended by backerboard manufactures, and required by most building codes, to use an additional impervious moisture barrier behind the backerboard. *Thus, contractors are forced to install the backerboard and separate moisture barrier in the field, at the construction site. Specification, Page 1, Lines 23-28.*

Mathieu embodies the very essence of the prior art that the present application attempts to improve upon. The membrane 2 of Mathieu is nothing more than a carrier for the conveyor, described as a deficiency in the prior art regarding another patent:

U.S. Reissue Patent No. Re32,037 to Clear is a method for manufacturing cementitious reinforced panels and illustrates a concrete panel 11 having reinforcement layers 12, 13 and a polyethylene layer 20 adjacent one of the layers 12, 13. Layers 12 and 13 are described as mesh reinforcing elements, preferably constituting fiber mesh like pervious webs, each entrained in hydraulic cement. Layer 20 is a carrier sheet placed under reinforcing element 12 during manufacture. Yet, such methods of constructing backerboards are not only deficient because they produce an inferior wet-

area panel, but also because they require the use of a carrier sheet.  
*Specification, Page 2, Lines 6-13.*

While membrane 2 appears in many of the Figs. of Mathieu, Mathieu discloses that the membrane 2 is *not* part of the final construction element or panel, but (just like Clear), this membrane 2 is only a temporary film membrane that protects the cementitious lower surface of the panel from the conveyor belt or support structure during the manufacturing process. This temporary film membrane is typically referred to in the art as a carrier sheet or carrier web. Yet, it is an object of the present invention to rid this requirement of the prior art use of a carrier web:

The present method of constructing the backerboard dispenses with the prior art requirement of a carrier sheet or web. *Specification, Page 3, Lines 6-7.*

#### 4. Fees

No Claim fees or extension fees are believed due. This *Response and Amendment After Final Amendment* is being filed within six months of the *Final Office Action*, and more specifically within two months. Nonetheless, should any further fees be due, authorization to charge deposit account No. 20-1507 is hereby given.

**CONCLUSION**

By the present *Response and Amendment After Final Rejection*, the Application has been in placed in full condition for allowance. Accordingly, Applicant respectfully requests early and favorable action. Should the Examiner have any further questions or reservations, the Examiner is invited to telephone the undersigned Attorney at 404.885.2773.

I hereby certify that this correspondence is being submitted via facsimile to the USPTO to the After Final fee number for AFT Unit 3600 at 703.872.9327 addressed to Commissioner for Patents, Mail Stop AF, Honorable Commissioner of Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on 8 August 2003

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8 August 2003

Date

Respectfully submitted,



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